Preliminary Results as of 11/21/03

Table 1 – Air Test Methods for Known Carcinogens

Chemical	Limit	Result
Arsenic, inorganic	PEL 0.01 mg/m^3	<0.0068 mg/m^3
Asbestos	EPA 0.01 f/cc (background)	≤0.007 f/cc
Benzene	REL 0.1 ppm	Expect results 11/26/03.
Cadmium	PEL 0.005 mg/m^3	<0.00011 mg/m^3
Chromium, hexavalent	0.001 mg/m^3	≤0.0007 mg/m3
Diesel particulate matter (DPM)	0.02 mg/m^3 as elemental carbon (ACGIH – withdrawn notice of intended change)	All ≤0.0037 mg/m^3
Polycyclic aromatic hydrocarbons (PAHs)	REL 0.1 mg/m^3 as cyclohexane extractable fraction	Expect results 11/25/03.
Radon	EPA 4 pCi/L	All ≤0.7 pCi/L
Silica, crystalline	REL 0.05 mg/m^3	Expect results 11/24/03.

[1] PEL – Permissible Exposure Limit (WISHA) – 8-hr Time Weighted Average (TWA)
[2] REL -- Recommended Exposure Limit (NIOSH) – 10-hr TWA
[3] EPA – Environmental Protection Agency Recommendation
NE – Not established

Table 2 – Air Test Methods for Other Known Health Hazards

Hazard	Limit	Results
Carbon monoxide (CO)	25 ppm ACGIH	All results well below limit.
Carbon dioxide	1,000 ppm ASHRAE odor control; 5,000 ppm OSHA PEL; 30,000 ppm OSHA 15-minute limit	Indoor levels exceeded 1,000 in bunkroom for an 8-hour period on 11/4/03, but did not exceed the OSHA limits.
Temperature	68°–74° F (winter); 73°–79° F (summer), ASHRAE comfort	Temperature levels below 68 F for a 12-hr period starting 10/28/03; for a 22-hr period starting 10/29/03; for a 96-hour period starting 10/30/03 and extending to 11/03/03. Temperature slightly over 74 F for a 3-hour period on 11/04/03.
Humidity	30-50% ASHRAE comfort	Indoor levels exceeded 50% during 10/27-28; below 30% for 56-hrs starting 10/30/03 and for 5 hrs on 11/3/03.
Lead	PEL 0.05 mg/m^3	All ≤0.0014 mg/m^3
Mercury	PEL 0.05 mg/m^3	Expect results 11/25/03.
Mold	Substantially higher than outdoors	There is an absence of evidence to indicate the likely

Hazard	Limit	Results
		presence of mold growth indoors.
Bacteria	Substantially higher than outdoors	Some indication of bacterial growth due to water intrusion. More data review and possible testing needed.
Respirable dust	PEL 5 mg/m^3	Expect results 11/24/03.
Volatile organic compounds (VOCs)	Various	Expect results 11/25/03.

Table 3 – Test Methods for Other Known Health Hazards

	Compound	Limit	Results
Soil in basement	Lead	250 mg/kg residential (MTCA)	One sample 1,500 mg/kg; the other sample within limits. Recommend covering soil with plastic.
Basement walls of firing range	Lead	EPA residential: 40 ug/ft^2	All samples exceeded; the high value was 6,600 ug/ft^2. Recommend further testing to define area and then remediate.
Surfaces where fluorescent and other lights are stored or were broken	Mercury	Above detection limit.	ND
Fluorescent light ballasts	PCBs	Any leakage from ballast without "No PCB" label	No leakage observed.
Damp wood/paper	Mold	Significant growth	None observed.
Damp surfaces	Bacteria	Significant growth	None observed.
Tiles, pipes	Asbestos	EPA 1%	Still being evaluated
Settled dust	Components	Significant amount of non-expected substances (i.e., not pollen, paper, or skin)	Expect results 11/25/03.
Bunker gear storage areas, laundry area	PAHs	Above outdoor levels	Expect results 12/2
Bricks	Sealant		Expect results 11/25/03.
Bricks	"White stuff"	None established	Expect results 11/21/03.
Drinking water	Lead	EPA 0.015 mg/L	Max 0.002 mg/L
Radiofrequency (RF)		See 47 CFR 1.1310 (FCC)	Expect results 11/24/03.
Ionizing Radiation		OSHA: 5000 mR/yr	See Table 4.
Pesticides	Organochlorine pesticides		Expect results 12/2/03.

Table 4 – Ionizing Radiation, Fire Station 31, Nov. 2003

This table presents the results of a screening level radiation survey conducted at Fire Station 31. For comparison purposes, additional measurements were taken

outdoors, in cars on the road, and in other unrelated structures. Also, the average radiation received by people in from medical/dental X-rays was added. The third from the last line is an estimate of the average radiation each person in the U.S. is exposed to each year from all sources (natural and man-made). The last two lines are the OSHA limits for occupational radiation exposure per year. These results indicate that the radiation received by a firefighter stationed in Fire Station 31 would be approximately the same as person living in a red brick house in Seattle. These levels are also well below OSHA occupational health standards for radiation exposure. The actual dose received by a firefighter would be less, since a portion of their time during work is outside the station, where outdoor levels would apply. Therefore, there is no reason for any precautions regarding radiation at the firehouse.

Location			**Reading in uR**	**Time in hrs**	**mR/hr**	**mR/yr**
Car	Eastlake Ave		1.34	0.17	0.0077	68
Outdoors	~500 ft. from F.S. 31		0.74	0.08	0.0089	78
Car	Aurora Ave		4.60	0.50	0.0092	81
Red Robin	U Bridge		10.60	1.14	0.0093	81
Outdoors	~50 ft. from F.S. 31		0.85	0.08	0.0102	89
Poured concrete office bldg	6th Ave N.		186.00	17.38	0.0107	94
F.S. 31	Beanery	center table	1.05	0.08	0.0127	111
Medical/dental x-rays per person						114
F.S. 31	Beanery	center counter	237.00	17.98	0.0132	116
F.S. 31	Engine office		941.00	71.25	0.0132	116
F.S. 31	Watch office	Countertop	1.12	0.08	0.0135	118
F.S. 31	Weight Room	Desk	1.13	0.08	0.0136	119
F.S. 31	Battery/slop	Countertop	1.13	0.08	0.0136	119
F.S. 31	Ladder office	top of file cab. near desk	1.15	0.08	0.0139	122
Red brick home (int. & ext.)	N. Seattle	125th & Dayton	166.40	11.67	0.0143	125
F.S. 31	Apparatus	11' 9" from SE corner	1.19	0.08	0.0143	126
F.S. 31	TV Room	NE chair	1.24	0.08	0.0149	131
F.S. 31	Bunkroom	SE bed	1.28	0.08	0.0154	135
F.S. 31	Apparatus	24" from SE corner	1.43	0.08	0.0172	151
F.S. 31	Apparatus	9" from SE corner	1.57	0.08	0.0189	166
Avg received per person in U.S.						312
OSHA Limit (pregnant women, during gestation period)						500
OSHA Limit (whole body, other than pregnant women)						5000

mR = milliroentgen, a measure of the amount of radiation energy transferred to an object.
Note that the amount of radiation actually absorbed by the human body is less, as some passes through without affecting any body cells. For more information on the distinctions between the various types of radiation measurements, see http://www.bartleby.com/64/C004/037.html